

## Data Requirements of ALL Regions to Improve Global Comparability Across Countries

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6<sup>th</sup> Technical Advisory Group Meeting

October 3-4, 2011

Washington DC

# Improving comparability of ICP when Basic Heading treatments differ across regions

- In the 2011 ICP methods will differ for the same basic heading within and between regions. Some of these Problem Basic Headings are:
  - a. Government collective expenditure where no price comparisons can be made and some health expenditures.
  - b. Government expenditures on education and where direct quantity comparisons are possible.
  - c. Dwelling services where direct quantity and direct price comparisons are assumed to arrive at comparable volumes
  - d. Construction where labor productivity adjustments are required.

# Implications of the April, 2011 TAG decision to use the CAR method.

- 1. Briefly CAR aggregates all headings across all participating countries to obtain totals for domestic absorption or GDP for each country and region.
- 2. Then the regional aggregates are redistributed within each region to preserve the results of the regional comparisons.
- 3. The EU and OECD estimate general government quantities by deflating expenditures wage based parities, for example. But following the TAG some other regions adjust wages for productivity of labor so a significant non-comparability is introduced.

# Operational questions in applying common adjustments to countries in all regions

- Suppose the TAG agrees that there are not enough standard tests for all countries to use adjusted students as a direct volume for education using the EU-OECD method. For this significant expenditure heading it is desirable to apply a common method to make volume comparisons for all countries.
  - 1. Data are required for a significant number of countries for the common method to be applied. In some cases the Global Office can obtain the necessary data from international sources, but expenditures per pupil by level must be requested.
  - 2. Countries that serve as bridge countries, like Russia and Turkey would need to supply data to the GO for common methods, like expenditures per pupil by level .
  - 3. Only then can the CAR method be applied.

# Treatment of Countries where data is unavailable or problematic

- Data for some countries may not be available from international sources or from current or reliable national surveys.
- When this occurs it may be necessary to impute values for such countries.
- This can be done by inferring values from estimating equations or assigning their weight to those countries with similar characteristics that have the necessary data.
- In the CAR approach such imputed values are only used to obtain comparable regional volumes so even very rough estimates are of little consequence in the overall results and are not published for countries.

# The Problem BH Illustration: Dwelling Services?

- The TAG has blessed both the direct and indirect quantity approach, giving priority to the latter based on rent surveys
- Experience of the 2005 has suggested that it is crucial for either approach that we have expenditure data that fully reflects the flow of dwelling services from the housing stock. Put another way the methods of attributing values to the dwelling services in the national accounts should be available.
- However, even if expenditures on dwelling services are correct, there is a bias in using the direct quantity to estimate the volume of housing because it does not include enough quality factors as illustrated below for South America in 2005.

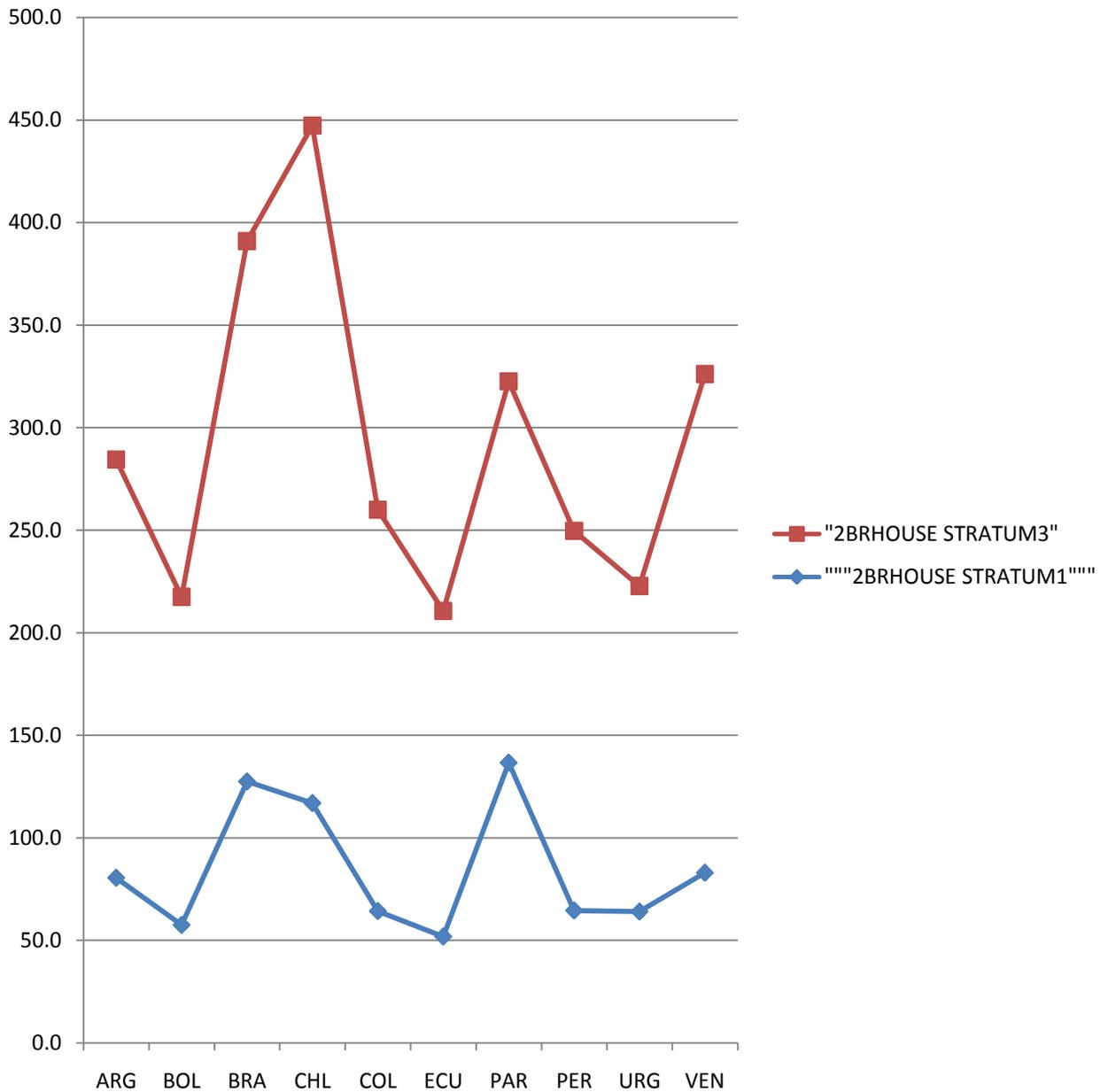
# Urban South America, 2005

- Table 2 provides rents by three quality Stratum and by number of bedrooms from 1 to 4.
- Stratum 1 is the lowest quality, but the lowest quality stratum represents all the characteristics associated with the highest quality in the direct quantity approach.
- Stratums 2 and 3 thus have more amenities and higher rents per bedroom than identified by the direct quantity approach.
- Chart 1 shows that average rents of Stratum 1 are much below Stratum 3. However, in the Direct Quantity approach we treat them as equivalent. The TAG needs to come up with a way to address this problem.

# South American urban rent sample for 10 ICP Countries, 2005

Table 2	South	America	Average	Rents in US\$	at Xrates	Rents per	Rents per
Quality Level	Dwelling Type	Apartment	House	Apartment	House	Bedroom	Bedroom
	No. Bedrooms	Rent/Month	Rent/Month	Ratio 4/1 BR	Ratio 4/1 BR	Apartment	House
STRATUM 1	1 dorm.	65	65	1.00	1.00	65.09	64.93
STRATUM 1	2 dorm.	87	85	1.33	1.31	43.68	42.34
STRATUM 1	3 dorm.	115	106	1.76	1.64	38.32	35.19
STRATUM 1	4 dorm.	112	118	1.73	1.83	27.97	29.57
STRATUM 2	1 dorm.	129	103	1.00	1.00	129.16	102.52
STRATUM 2	2 dorm.	153	141	1.21	1.38	76.61	70.75
STRATUM 2	3 dorm.	185	189	1.47	1.82	61.83	63.06
STRATUM 2	4 dorm.	291	257	2.27	2.39	72.85	64.29
STRATUM 3	1 dorm.	175	134	1.00	1.00	175.10	134.43
STRATUM 3	2 dorm.	243	208	1.40	1.53	121.48	104.24
STRATUM 3	3 dorm.	333	309	1.92	2.23	110.97	102.87
STRATUM 3	4 dorm.	532	619	2.96	4.47	133.04	154.64

# Chart 1: South America 2 bedroom



# How do we Link Dwelling Services Within and Between Regions?

- Even when all countries in a region use the direct quantity approach the problem just identified does not go away. Why?
  - Because the relative rents differ between countries. For example the ratio of rents of low and high stratum rents range from 1.36 in Peru to 3.04 in Chile. This is illustrated in Figure 1 and the previous Table.
  - Further the number of dwellings in each quality Stratum will differ across countries and most likely correlated with the differences in rents by stratum.
- The TAG has agreed to collect direct quantity information for all countries. My recommendation would be to also collect as much direct rent information as available even if just urban housing as in South America.

# Dwellings rental data needs from countries in all Regions

- In my proposal to link Regions the GO requires as much market rent and housing stock data as available to adequately represent the world wide variation. Again it is not necessary that each country provide the data but is essential for bridge countries.
- In 2005 both the EU-OECD and Western Asia collected both kinds of information and used it within their regions. And as illustrated South America had both types of data.
- But many countries in Asia-Pacific and Africa supplied inadequate housing stock information and no attempt was made to use any non-national rent surveys so this would require changes in these regions.

# The situation with collective government and some health services

- At present wage comparisons are requested for collective government. Many of the occupations overlap other headings so these data are very useful. Also good employment data by occupation should be requested.
- The EU-OECD do not plan to make any adjustments to wages for possible productivity differences. However, TAG has recommended labor productivity adjustments in other regions using some commonly accepted determinants like capital per worker. Requests should be made for some countries in each Region including the EU-OECD and bridge countries for estimates of the sectoral composition of the capital stock.
- At this time the situation with with respect to health services is an unknown to the TAG. In any event requests for employment data by occupations in hospitals and public clinics, or failing that, the total health sector should be requested. In addition capital stock in the health sector, even if not current, should be requested from countries with such data.

# The Education headings

- Questions of estimating quality adjusted students as a direct volume measure will be discussed at another TAG session.
- To replicate the 2005 treatment, countries will be requested to supply salaries of teachers at three levels. As for health and collective government, teacher numbers should also be collected.
- It is recommended that qualifications of teachers at each level should also be collected as an input to either quality adjustment of students, or inputs to teacher productivity.
- And finally information on capital stock in education should be requested, or related information on the m<sup>2</sup> of covered school buildings.

# Other BHs where estimated parities are based on inputs

- The methods described previously can be applied with modifications to other headings where the TAG has recommended productivity adjustments.
- An example is construction where input prices including wages are being collected in order to estimate PPPs.
- The TAG has recommended making productivity adjustments for labor in the construction sector. Data requirements include the labor force in construction, usually available from occupation questionnaires.
- National estimates of the sectoral composition of the capital stock should be available for some countries. Equipment rentals are also being collected and may be an alternative.